Comments to the Proposed Regulations under Subtitle 08 WATER POLLUTION published in the Maryland Register on January 13, 2012 (Closing February 13, 2012)

Comments Provided By:

1. Larry Merrill - Environmental Protection Agency – Region III
2. Nat Brown – Maryland Port Administration; Kenna Oseroff- Maryland Environmental Service
3. Julie Pippel – Maryland Association of Municipal Wastewater Agencies, Inc.
4. Julie Pippel – Virginia Association of Municipal Wastewater Agencies, Inc.

Comments specific to the Proposed Changes:

Comments from Larry Merrill - Environmental Protection Agency – Region III:

"Dear Mr. Backus:

I am pleased to offer comments in on the proposed Revision to Regulation .03-3 under COMAR 26.08.02 Water Quality which was published in the Maryland Register on January 13, 2012.

The proposed Revision includes two specific changes:

(1) Establish a dissolved oxygen (DO) criteria restoration variance of 2% non-attainment by volume and duration for the seasonal deep channel refuge use of the Eastern Bay Mesohaline (EASMH) segment.

(2) Increase the DO restoration variance for the seasonal deep channel refuge use of the Lower Chester River Mesohaline (CHSMH) from 14% to 16% non-attainment by volume and duration and move (recodify) this subparagraph to the appropriate paragraph.

Maryland's proposed amended water quality standards reflect improved scientific understanding of the Chesapeake Bay water quality responses and are products of the continuing scientific collaboration between Maryland and U.S. Environmental Protection Agency (EPA).

For the Eastern Bay Mesohaline segment, the water quality was analyzed by running the Phase II Watershed Implementation Plan Planning Targets loads through the updated Bay water quality model. That analysis indicated that the deep channel leading from the mainstem Bay CB4MH segment (which currently has a DO restoration variance of 2% of the seasonal deep channel refuge use) into the Eastern Bay deep channel would be 2% non-attainment of Maryland's applicable DO criterion measured by volume and duration of the seasonal deep channel use. This portion of the deep channel, starting in the CB4 segment and entering into the deep channel portion of the Eastern Bay segment, is considered part of the Eastern Bay segment due to the artificial segment boundary based on the 'mouth' of Eastern Bay. EPA and Maryland

scientists have evaluated the hydrodynamic, water quality and bathymetric connections between the mainstem Bay and Eastern Bay through the shared deep channel, and have assessed the patterns of attainment between deep water and deep channel designated uses of these segments. As a result of these analyses, Maryland has proposed this restoration variance for the Eastern Bay seasonal deep channel designated use similar to that in place for the restoration use for CB4MH segment's deep channel designated use.

In the Lower Chester River Mesohaline, the water quality was likewise projected by running the Phase II Watershed Implementation Plan Planning Targets loads through the updated Bay water quality model. Even after reducing loads to the Phase II planning targets, the physical conditions present in the lower Chester River's deep channel are still likely to prevent full attainment of Maryland's applicable DO criterion in the deep channel. Updated Bay models now represent that nonattainment of the applicable DO criteria would be at a slightly higher level (16%) than the original 14 % of the deep channel refuge use. That 14% variance was included in a water quality standards amendment adopted and approved by EPA in 2010. Accordingly, Maryland now proposes this revision to this previously approved action.

As defined by Maryland in state regulations, these proposed revisions would define the allowable exceedance of a specific water quality criteria based on the best available scientific understanding consistent with Clean Water Act requirements. The revisions are temporary and will be reviewed at a minimum of every three years, as required by the Clean Water Act and EPA regulations, and may be modified based on new scientific findings.

Based on the current information presented, the proposed revisions appear to be consistent with the latest information and understanding of the water quality responses in the Chesapeake Bay.

Please note that the positions described in our comments above are preliminary in nature and do not constitute a final decision by EPA under Clean Water Act § 303(c). Approval/disapproval decisions will be made by the Region following adoption of new/revised standards by the state and submittal to EPA. Any determination pursuant to Clean Water Act § 303(c)(4)(B) may only be made by the Administrator."

MDE Response:

MDE thanks EPA Region III for their thorough review of the proposed amendments to water quality standards and appreciates their comments and support.

Comments from Nat Brown – Maryland Port Administration; Kenna Oseroff- Maryland Environmental Service

"In response to your email below I have summarized the changes that should take effect in the State Water Quality Standards (SWQS) below and offered one clarification to be submitted to MDE.

EPA identified, through modeling, that within the middle, mesohaline segment of the Bay, non-attainment of dissolved oxygen (DO) set for the designated uses associated with deep water fish and shellfish occurred for the entire mesohaline segment. Specifically, studies were completed to show that further nutrient reduction of loads didn't increase the attainment of the DO in the deep channels in certain tidal areas including the Patapsco River mesohaline deep channel, the lower Chester River's, and Eastern Bay's deep channel, as well as the entire Bay Mainstem Segment 4 mesohaline. As a consequence, EPA instituted a variance for the nutrient TMDLs for deep channels in the watersheds mentioned below based on the findings.

For the Bay Mainstem Segment 4 there is a 7% variance, Patapsco River mesohaline segment (PATMH) there is a 14% variance, the Chester River there is a 16% variance, and for the Eastern Bay there is a 2% variance from June 1st to September 30th. This means that EPA feels that the target allocations are adequate to restore the designated uses in these sections of the Bay's deep channels. This would be applicable to any permits issued for a watershed that effect the designated uses for the deep channels for fish and shellfish refuge.

This change will reduce the needs for reductions of nutrients associated with the Bay TMDL (nitrogen, phosphorous, and sediment) which implies reductions in cost for implementation. Poplar Island would not be affected by this change since the SWQS for DO requirement for Poplar is determined by the shallow water bay grasses and open-water fish and shellfish uses. However, Masonville and Cox Creek are subject to the Baltimore Harbor TMDL, as well as the Bay TMDL (PATMH location), where deep water fish and shellfish habitat is taken into consideration for nutrient limits/loads. HMI is still waiting on the new permit to be issued and the jury is still out on whether or not nutrient loads will be written into the new permit. (Conversations with Paul Hlavinka, MDE Permit writer, at the December 14th, 2011 MDE TMDL waste load allocation meeting.)

MES requests clarification from MDE regarding how this change effects (or if this change effects) reporting and/or allocations associated with the Baltimore Harbor TMDL for the nutrient loads associated with June 1st through September 30th discharges".

"MES on behalf of MPA, requests clarification from MDE regarding how this change effects (or if this change effects) reporting and/or allocations associated with the Baltimore Harbor TMDL for the nutrient loads associated with June 1st through September 30th discharges."

MDE Response:

MDE thanks MPA and MES for their thorough review of the proposed amendments to water quality standards and appreciates their comments.

The Bay TMDL has more stringent loads in the Baltimore Harbor watershed (PATMH) and is to replace the existing TMDL. The Baltimore Harbor TMDL, for example, set allocations that meet standards in most of the Harbor's waters but did not meet in the Deep Channel, whereas more

stringent allocations in the corresponding Bay TMDL (MD-PATMH) result in attainment in *all* waters in the Harbor, including the Deep Channel, as verified by the Bay Model. The changes proposed in this action will affect discharges/allocations associated with the Baltimore Harbor only in the most general way. That is, that without these changes, an additional 4 million pounds of reduction from current loads would be needed. These additional Bay-related reductions would likely be distributed to numerous segments, so without these water quality actions, any current allocations would be lower and increased reductions would be necessary, potentially including those for Baltimore Harbor.

Comments from Maryland Association of Municipal Wastewater Agencies, Inc.:

Maryland Association of Municipal Wastewater Agencies, Inc.
Harford County
145 N. Hickory Avenue
Bel Air, Maryland 21014
Tel: 410-638-3300· Fax: 410-638-3024

February 13, 2012

By E-Mail & First Class Mail

Mr. John Backus
Chief, Water Quality Standards Section
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21114

Re: Revisions to Water Quality Standards (COMAR 26.08.02.03-3)

Dear Mr. Backus:

Please accept this letter on behalf of the Maryland Association of Municipal Wastewater Agencies, Inc. (MAMWA), in response to the Notice of Proposed Action (Notice) published January 13, 2012, in Volume 39, Issue 1 of the *Maryland Register* inviting comments to possible changes to the above-referenced regulation. MAMWA is a statewide association of local governments, sanitary districts, and commissions that own and operate municipal wastewater treatment plants. MAMWA is committed to the development of water quality programs based on sound science and good public policy.

MAMWA has been involved in Bay clean-up discussions since the 1990s, including development of the Tributary Strategies and the Bay TMDL. Over this time, MAMWA scientists have served on technical committees and contributed independent data analyses. Additionally, in November, 2010, MAMWA submitted formal comments regarding EPA's Draft Bay TMDL.

MAMWA supports the Maryland Department of the Environment's (MDE) efforts to revise the State's existing water quality criteria to incorporate a new 2% restoration variance for the Eastern Bay Mesohaline (EASMH) and to increase the restoration variance for the Lower Chester River Mesohaline (CHSMH) from 14% to 16%.

MDE's proposal is supported by sound science, as illustrated in the attached "Technical Documentation of the Evaluation of the Lower Chester River's and the Eastern Bay's Deep-Channel Designated Uses Non-attainment of Existing Dissolved Oxygen Criteria at the Bay TMDL Level of Effort Loads."

MAMWA scientists have evaluated the technical basis for the proposed amendments, including the modeled water quality responses and morphology of the segments in question. Based on this review, MAMWA has concluded that the proposed amendments are supported by the scientific and modeling information. The primary reasons for this conclusion are as follows:

- The amendments affect only the deep-channel seasonal refuge uses of the Eastern Bay and Chester River segments. Dissolved oxygen in these waters is strongly affected by natural, non-controllable phenomena such as density stratification and bathymetric profiles that impede re-aeration at depth.

- The Eastern Bay segment is a natural extension of the mainstem Bay segment that already has a variance, and water quality in the Eastern Bay segment will be strongly affected by water quality in the adjacent segment. Hence, the segment boundary at the "mouth" of the Eastern Bay segment is largely one of mapping convenience. With respect to dissolved oxygen dynamics, it is a shared deep channel system, and the same factors that led to the variance in the mainstem Bay also apply to the Eastern Bay.

- Model predictions demonstrate that the non-attainment rates in both the Eastern Bay and Chester River segments are largely insensitive to additional load reductions; a loading decrease of 4 million pounds/year was only predicted to change attainment by 1-2%. Hence, the proposed variances would prevent a large increase in expenditure for almost no water quality benefit. Thus, we further agree with MDE that the proposal would result in "significant savings for all of the jurisdictions in the Chesapeake Bay drainage," including Maryland.

- Given the likely model precision, the 1-2% changes are probably smaller than the model's ability to actually distinguish between model scenarios, and would be difficult to even detect in monitoring data. It has been MAMWA's position that very small changes in imprecise model predictions should not undermine established allocations. The proposed amendments are consistent with this conclusion.

We appreciate the opportunity to comment on this important matter. If MAMWA can provide any further information regarding our views, or answer any questions regarding this letter, please direct any inquiries to Chris Pomeroy at chris@aqualaw.com or (804) 716-9021 x202.

Sincerely,

Julie Pippel

Julie Pippel

cc: MAMWA Members
Christopher D. Pomeroy, Esq., AquaLaw PLC

MDE Response:

MDE thanks MAMWA for their thorough review of the proposed amendments to water quality standards and appreciates their comments and support.

Comments from Virginia Association of Municipal Wastewater Agencies, Inc.:

VIRGINIA ASSOCIATION OF MUNICIPAL WASTEWATER AGENCIES, INC.
P.O. Box 51
Richmond, Virginia 23218-0051
Tel (804) 716-9021 • Fax (804) 716-9022

February 13, 2012

By E-Mail & First Class Mail

Mr. John Backus
Chief, Water Quality Standards Section
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21114

Re: Revisions to Water Quality Standards (COMAR 26.08.02.03-3)

Dear Mr. Backus:

Please accept this letter on behalf of the Virginia Association of Municipal Wastewater Agencies, Inc. (VAMWA), in response to the Notice of Proposed Action (Notice) published January 13, 2012, in Volume 39, Issue 1 of the *Maryland Register* inviting comments to possible changes to the above-referenced regulation. VAMWA is a statewide association of local governments and authorities that own and operate municipal wastewater treatment plants. VAMWA is committed to the development of water quality programs based on sound science and good public policy.

VAMWA has been involved in Bay clean-up discussions since the 1990s, including development of the Tributary Strategies and the Bay TMDL. Over this time, VAMWA scientists have served on technical committees and contributed independent data analyses. Additionally, in November, 2010, VAMWA submitted formal comments regarding EPA's Draft Bay TMDL.

VAMWA supports the Maryland Department of the Environment's (MDE) efforts to revise the State's existing water quality criteria to incorporate a new 2% restoration variance for the Eastern Bay Mesohaline (EASMH) and to increase the restoration variance for the Lower Chester River Mesohaline (CHSMH) from 14% to 16%.

MDE's proposal is supported by sound science, as illustrated in the attached "Technical Documentation of the Evaluation of the Lower Chester River's and the Eastern Bay's Deep-Channel Designated Uses Non-attainment of Existing Dissolved Oxygen Criteria at the Bay TMDL Level of Effort Loads."

VAMWA scientists have evaluated the technical basis for the proposed amendments, including the modeled water quality responses and morphology of the segments in question. Based on this review, VAMWA has concluded that

the proposed amendments are supported by the scientific and modeling information. The primary reasons for this conclusion are as follows:

- The amendments affect only the deep-channel seasonal refuge uses of the Eastern Bay and Chester River segments. Dissolved oxygen in these waters is strongly affected by natural, non-controllable phenomena such as density stratification and bathymetric profiles that impede re-aeration at depth.

- The Eastern Bay segment is a natural extension of the mainstem Bay segment that already has a variance, and water quality in the Eastern Bay segment will be strongly affected by water quality in the adjacent segment. Hence, the segment boundary at the "mouth" of the Eastern Bay segment is largely one of mapping convenience. With respect to dissolved oxygen dynamics, it is a shared deep channel system, and the same factors that led to the variance in the mainstem Bay also apply to the Eastern Bay.

- Model predictions demonstrate that the non-attainment rates in both the Eastern Bay and Chester River segments are largely insensitive to additional load reductions; a loading decrease of 4 million pounds/year was only predicted to change attainment by 1-2%. Hence, the proposed variances would prevent a large increase in expenditure for almost no water quality benefit. Thus, we agree with MDE that the proposal would result in "significant savings for all of the jurisdictions in the Chesapeake Bay drainage," including Virginia.

- Given the likely model precision, the 1-2% changes are probably smaller than the model's ability to actually distinguish between model scenarios, and would be difficult to even detect in monitoring data. It has been VAMWA's position that very small changes in imprecise model predictions should not undermine established allocations. The proposed amendments are consistent with this conclusion.

We appreciate the opportunity to comment on this important matter. If VAMWA can provide any further information regarding our views, or answer any questions regarding this letter, please direct any inquiries to Chris Pomeroy at chris@aqualaw.com or (804) 716-9021 x202.

Sincerely,

Robert C. Steidel

cc: VAMWA Members
Christopher D. Pomeroy, Esq., AquaLaw PLC

MDE Response:

MDE thanks VAMWA for their thorough review of the proposed amendments to water quality standards and appreciates their comments and support.